

WHAT IS CLAIMED IS:

1. A system for bypassing an aneurysm comprising a first prosthesis and at least one bypass prosthesis communicating with the first prosthesis, said first prosthesis comprising a proximal end configured to engage an unsuitable section of artery upstream of an aneurysm.
2. The system of claim 1 wherein the first prosthesis comprises a stent and a graft material communicating with the stent.
3. The system of claim 1 wherein said first prosthesis comprises a proximal end comprising a first matrix comprising distally extending struts.
4. The system of claim 3 wherein the struts form at least one geometric shape.
5. The system of claim 3 wherein said first prosthesis further comprises at least one second matrix of struts positioned distally from said first matrix.
6. The system of claim 5 wherein said second matrix is configured to receive at least one bypass prosthesis.
7. The system of claim 6 wherein a proximal portion of said second matrix is configured to receive a proximal portion of said bypass prosthesis.
8. The system of claim 6 wherein said second matrix is configured to receive two bypass prostheses.
9. The system of claim 3 wherein the first matrix further comprises a distal portion configured to bridge a section of the artery unsuitable for anchoring the prosthesis.

10. The system of claim 9 wherein a section of the artery unsuitable for anchoring the prosthesis comprises at least one of a short length of artery, and angulated artery, a section of artery containing a junction with another artery, and combinations thereof.

11. The system of claim 1 wherein the first prosthesis comprises a stent comprising a first matrix and a second matrix and at least one longitudinally extending strut connecting the first matrix to the second matrix.

12. The system of claim 11 further comprising a graft material configured to engage the second matrix.

13. The system of claim 11 wherein the first matrix is configured to anchor the prosthesis in an artery.

14. The system of claim 11 wherein at least one longitudinally extending strut comprises a plurality of struts.

15. The system of claim 14 wherein the plurality of struts are straight.

16. The system of claim 14 wherein the plurality of struts include an intermediate section in which the struts are in close proximity to each other.

17. The system of claim 16 wherein the intermediate section comprises a joint.

18. The system of claim 16 wherein the intermediate section comprises a hinge.

19. The system of claim 16 wherein the intermediate section comprises an axis.

20. The system of claim 16 wherein the intermediate section comprises a hub.

21. The system of claim 16 wherein the intermediate section is configured to allow the first prosthesis to bend.

22. The system of claim 16 wherein the intermediate section is configured into an angle.

23. The system of claim 22 wherein the angle is greater than about 45 degrees.

24. The system of claim 5 further comprising an axis interposed between the first matrix and the second matrix.

25. The system of claim 24 wherein said axis is configured to position said first matrix at greater than about a 45 degree angle from said second matrix.

26. A method for bypassing an aneurysm comprising positioning a first portion of a first prosthesis in a first section of an artery, positioning a second portion of the first prosthesis in a second section of the artery, said second section being upstream or an aneurysm, and engaging at least one second prosthesis with the first prosthesis, said second prosthesis forming a fluid flow path that bypasses the aneurysm.

27. A system for bypassing an aneurysm comprising:
a first prosthesis having a proximal end configured to engage a portion of an artery upstream of a cross-flow artery and a distal end configured as a sealing means; and
at least one second prosthesis engaging the distal end of the first prosthesis.

28. A system for bypassing an aneurysm comprising:
a first prosthesis having a stent and graft material covering at least a portion of the stent; and
at least one second prosthesis engaging the first prosthesis for bypassing the aneurysm.

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